

# Iowa's Clean Air Attainment Program (ICAAP)

## *Application Handbook*



Iowa Department of Transportation  
Systems Planning Bureau  
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## I. Purpose

The Iowa Department of Transportation (DOT) created the Iowa's Clean Air Attainment Program (ICAAP) in 1994 and modeled it after the federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program. The CMAQ Program was established as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and has been continued in each subsequent surface transportation reauthorization act since ISTEA.

The primary purpose of the CMAQ program is to provide funds to states for transportation improvement projects and programs that will assist their designated nonattainment areas and maintenance areas attain the National Ambient Air Quality Standards (NAAQS) of the 1990 Clean Air Act Amendments (CAAA).

As such, the purpose of ICAAP is to help finance transportation projects and programs in Iowa that result in attaining or maintaining the NAAQS of the 1990 CAAA with a focus on volatile organic compounds, nitrogen oxides, carbon monoxide and, under certain conditions, particulate matter. The ICAAP reflects the spirit of the U.S. Congress in its effort to reduce motor vehicle congestion and realize the goals of the 1990 CAAA by awarding funding to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality.

## II. Background

Federal standards, known as NAAQS, are required to be set by the U.S. Environmental Protection Agency (EPA) at levels that protect human health. Those pollutants for which transportation sources are significant include:

- Carbon Monoxide (CO) is a colorless, odorless gas produced whenever incomplete fuel combustion occurs.
- Particulate Matter (PM<sub>2.5</sub> and PM<sub>10</sub>) consists of airborne solid particles and liquid droplets. These particles are classified as "coarse" if they are smaller than 10 microns, or "fine" if they are smaller than 2.5 microns.
- Ozone (O<sub>3</sub>) is a chemically unstable molecule composed of three oxygen atoms.

The most persistent pollution problem is ground level ozone. As the primary component of "smog", ground level ozone is not emitted directly by transportation exhaust emissions but is produced in the air during a complex photochemical reaction (sunlight and heat acting upon fuel combustion byproducts) involving:

- Nitrogen Oxides (NO<sub>x</sub>) from when nitrogen and oxygen atoms chemically react inside the high pressure and temperature conditions in an engine. Nitrogen oxides are precursors for ozone, and in the environment, they contribute to the formation of acid rain.
- Volatile Organic Compounds (VOC) are hydrocarbon emissions, a product of partial fuel combustion, fuel evaporation and refueling losses caused by spillage and vapor leakage. Hydrocarbons react with nitrogen oxides and sunlight to form ozone.

Air quality nonattainment areas are those where air pollution levels exceed the NAAQS of the CAAA. Air quality maintenance areas are former nonattainment areas that are now in compliance with the NAAQS. Iowa currently does not have any designated nonattainment or maintenance areas for transportation-related air pollution.

Therefore, the state may use its CMAQ funds for any eligible project or program specified in the CMAQ Program or the Surface Transportation Program (STP). The Iowa DOT encourages applicants to select projects and programs that are eligible under the CMAQ Program, since they more closely meet the objectives of the ICAAP.

Examples of eligible activities under ICAAP are project proposals that improve motor vehicle traffic flow, public transit service and intermodal freight movement; reduce traffic congestion and single-occupant vehicle travel; and help finance the purchase of publicly owned alternative fuel vehicles and bicycle and pedestrian facilities and programs.

The Iowa DOT administers the ICAAP on a statewide competitive application basis. Applications for ICAAP funding may be submitted by public entities such as cities, counties, public transit agencies, metropolitan planning organizations (MPO), regional planning affiliations (RPA) and state and federal agencies. Private non-profit organizations, individuals, and private for-profit entities may also apply with the co-sponsorship of a public entity. For the purposes of this program, the public entity will assume fiscal responsibility for the project. The award of ICAAP funds to private entities as part of a Public-Private Partnership (PPP) will be limited to those cases where the project strongly benefits the general public versus providing a solely private benefit. In addition, the ICAAP (or federal) share of project costs will be reduced from up to 80 percent of total eligible project costs to up to 50 percent of total eligible project costs for projects that include a private for-profit entity as part of a partnership.

Total national funding authorized for the CMAQ program are distributed nationwide based on each state's share of the population of air quality non-attainment areas weighted by the severity of air pollution. A minimum of one-half percent of each

annual federal apportionment is guaranteed to each state. Iowa receives the CMAQ funds under this minimum apportionment provision.

The average annual apportionment of these funds to Iowa under ISTEA was about \$4.7 million; under TEA-21 \$7.0 million; under SAFETEA-LU approximately \$8.7 million; and under MAP-21 and the FAST Act approximately \$11.0 million.

The annual apportionments vary from year to year due to Congressional budget considerations. Since 2014, the Iowa DOT has held the ICAAP funding level at \$4.0 million per year; a bus replacement program will be funded at \$3.0 million per year with the balance of funds directed by the State to discretionary CMAQ projects.

### **III. ICAAP Administration**

The Iowa DOT's Systems Planning Bureau manages the Iowa Clean Air Attainment Program. The office: (1) determines the eligibility of applicant-proposals; (2) participates in evaluating and ranking the proposals; (3) presents the ranked proposals and funding recommendations to the Iowa Transportation Commission; and, (4) disseminates ICAAP-related information to those interested in the program, including prospective applicants and funding recipients.

The ICAAP Project Evaluation Committee evaluates and ranks the proposals. The committee is composed of five members, one appointed representative from each of the following organizations: Iowa DOT, Iowa Department of Natural Resources (DNR), Iowa Public Transit Association (IPTA), MPOs, and RPAs. The Iowa Association of Regional Councils (IARC) and the Iowa MPO directors appoint the RPA and MPO representatives, respectively.

ICAAP funding applications must be submitted to the Iowa DOT by October 1 of each year. In the spring of the following year, the ranked proposals, with funding recommendations, are presented to the Iowa Transportation Commission for approval. The commission has final project selection authority. Funds become available October 1 of the following federal fiscal year. For example, an application submitted by October 1, will be considered by the Iowa Transportation Commission early in the next year and funds will become available on the following October 1.

Proposed ICAAP projects or programs must conform to MPO and RPA regional transportation planning processes and plans, and the MPOs and RPAs must certify such conformance. MPOs must confirm that the project or program is included in the fiscally-constrained transportation plan or will be amended into the fiscally-constrained transportation plan upon grant approval, and, if applicable, the

congestion management plan in TMAs. Applications for ICAAP proposals that cross regional boundaries should include certifications from all affected RPAs or MPOs.

Funding agreements between the Iowa DOT and the ICAAP funding recipients shall be prepared and executed by the Iowa DOT's District Offices or the Systems Planning Bureau for highway-related projects and the Office of Public Transit for transit-related projects.

The ICAAP program requires that all recipients provide a summary report upon completion of the project to measure the success of its effect on emissions. The summary may require before and after emissions calculations, comparisons of new data to the data submitted with the project application, or other measurements as applicable to the project. The preparation of this summary may require additional data collection or modeling. These tasks or services are not considered project costs and are not eligible for reimbursement.

The Iowa DOT makes ICAAP handbooks, applications and U.S. Environmental Protection Agency (EPA)-approved VOC, CO and NO<sub>x</sub> vehicle emission factors available on the Iowa DOT website at: [https://iowadot.gov/systems\\_planning/grant-programs/iowa-clean-air-attainment-program-icaap](https://iowadot.gov/systems_planning/grant-programs/iowa-clean-air-attainment-program-icaap)

#### **IV. Priority Use of ICAAP Funds**

The Iowa DOT will assign the highest priorities to feasible ICAAP proposals that cost-effectively maximize reductions in vehicle emissions (VOC, NO<sub>x</sub>, CO, PM-2.5 and PM-10) and traffic congestion. The types of projects or programs that are the highest priorities for ICAAP funding are those that:

- Demonstrate a direct benefit in reducing or eliminating O<sub>3</sub>, CO, PM-2.5 or PM-10 air pollution;
- Reduce single occupant vehicle (SOV) trips or vehicle miles of travel (VMT);
- Reduce vehicle congestion and improve traffic flow on highways and streets;
- Implement the TCMs or other transportation-related projects identified in an approved SIP (if needed); and
- Assist in developing management systems for traffic congestion, public transportation, or intermodal facilities.

ICAAP proposals should result from a strong participatory planning process involving close coordination among the Iowa DOT, MPOs, RPAs, and state and local air quality

agencies. ICAAP proposals also should be reflected as high priorities in congestion management system programs or long-range transportation plans.

Awarded projects must be added to approved MPO or RPA transportation improvement programs (TIPs) and Iowa's Statewide Transportation Improvement Program (STIP).

**Deferral:** If the EPA designates an area(s) in Iowa as a "nonattainment area(s)" for transportation-related O<sub>3</sub>, CO, PM-2.5 and PM-10, the state's un-obligated federal CMAQ funds shall be directed to that area(s) in accordance with the provisions of the current federal transportation statutes, 23 USC. Highest funding priorities will be given to transportation control measures (TCMs) and other projects documented in Iowa's State Implementation Plan (SIP) for air quality. The SIP, and the TCMs it contains, would be needed to assist the state in attaining and maintaining the NAAQS.

## **V. Project Eligibility**

Each ICAAP project proposal must have a minimum total project cost of \$20,000 to be eligible for funding assistance. Applications for ICAAP funding assistance must demonstrate that proposals will reduce vehicle emissions (VOC, NO<sub>x</sub> and CO) and, if applicable, reduce traffic congestion or increase transit ridership. Final determination of funding eligibility for individual projects is made by the Iowa DOT based on CMAQ or STP program guidelines.

Sponsors of ICAAP funding applications must calculate emission reduction estimates for each proposal using professional methodology and must document the estimates and methodology in the applications. Estimates of reductions in VMT and travel delays; increases in vehicle speeds; and changes in travel time, time of day, mode choice, trip length, trip frequency, and other relevant factors should also be documented in the applications.

To be eligible for ICAAP funding, the proposed projects and programs should fit into one or more of the following categories:

### **Traffic Flow Improvements**

Highway and street projects that focus on reducing traffic congestion, vehicle idling time, stop and go driving and travel delays; enhancing bus transit performance; and improving air quality. Projects may include traffic signal modernization, synchronization or coordination; incident management programs, ramp metering,

intersection improvements such as adding turn lanes; and other projects that achieve the objectives of the ICAAP.

#### Planning and Project Development Activities

Project development activities that lead to construction of facilities or new services and programs with air quality benefits. Preliminary engineering or project planning studies are eligible. This includes studies for the preparation of environmental or National Environmental Policy Act (NEPA) documents, but only if they directly support projects that improve air quality. (General planning activities such as economic, demographic or similar studies that do not propose or support transportation air quality projects are not eligible.)

#### Travel Demand Management

Strategies or programs that discourage single occupancy vehicle (SOV) use. Activities include innovative parking management (parking restrictions and differential parking fees), establishment of auto-free zones, promotion of employee trip reduction programs, and transportation management plans.

#### Transit Improvements

Construction of new transit facilities if associated with enhanced or new mass transit service (rehabilitation, reconstruction or maintenance of existing facilities are not eligible). Acquisition of public transit vehicles (bus, rail, van) only if related to new transit service or to expand the vehicle fleet. Emission effects of diesel-powered replacement vehicles must be documented because of their minimal impact on attaining the O<sub>3</sub>, CO, and PM standards. Operating assistance to support the start-up of discrete, newly added transit services is limited to three years of operating costs which must be easily identified; however, payments may be spread over a five-year period under certain conditions. **Separate applications must be submitted for each year operating assistance funding is requested.** Fare or fee subsidies may be eligible.

#### Shared-Ride Activities

Traditional rideshare (car pool and van pool) programs, including establishment of vehicle parking participants and programs that match drivers and passengers.

#### Bicycle and Pedestrian Facilities and Programs

Construction of bicycle and pedestrian facilities. Public education, promotional and safety programs to encourage and facilitate the increased use of non-motorized transportation modes (e.g. bicycling and walking for commuting purposes).

### Intermodal Freight

Capital projects and operating assistance to improve intermodal freight facilities where air quality benefits can be realized.

### Alternative Fuels

Purchase of publicly owned alternative fuel vehicles under certain conditions. Establishment of publicly owned on-site fueling facilities and other infrastructure needed to fuel alternative fuel vehicles.

### Vehicle Inspection and Maintenance (I&M) Programs

Includes one-time start-up activities, such as updating quality assurance software or developing a mechanic training curriculum; construction of facilities and purchase of equipment for I/M stations. All eligible I&M projects must meet EPA and NEPA requirements. The I&M programs must constitute new or additional efforts. Existing funding should not be displaced, and operating expenses are eligible for three years.

### Outreach Activities

Public education campaigns involving the linkage between transportation and air quality, advertising of transportation alternatives to SOV travel, and technical assistance to employers and marketing programs for promoting non-SOV travel options.

### SIP Transportation Projects and Programs

Transportation activities in an approved SIP, if applicable.

### Transportation Control Measures (TCM)

Generally, the TCMs specified in Section 108 (f)(1)(A) of the CAAA are eligible (many projects listed in this section are considered as TCMs).

### Other Projects and Programs

Other projects and programs that use promising technologies and feasible approaches to reduce air pollution emissions such as the establishment of transportation management associations (TMAs) for the specific purpose of developing and implementing transportation-related air quality improvement strategies. Funding for eligible TMA start-up activities is limited to three years.

## VI. Project Application Process and Target Dates

### April – August

The project sponsor (applicant) prepares and submits its ICAAP application to the MPO or RPA in the region. A sponsor submitting multiple applications in a given funding year (cycle) must rank the projects according to priority, from highest to lowest.

The application must include an **official endorsement** of the project from the authority to be responsible for the project's maintenance and operation. The authority must provide written assurance it will adequately maintain and operate the proposed project or program for its intended public use during the project's useful life, following project completion. The endorsement must also acknowledge the intent of the authority to provide the required matching funds. For cities, counties, or other political subdivisions, the endorsement should be in the form of a fully executed resolution by the elected body or board, as applicable.

### April – September

The MPO or RPA reviews the application for: (1) completeness; (2) financial feasibility of the ICAAP proposal; and (3) conformity of the proposal with the MPO's or RPA's regional transportation planning process and transportation plan and, if applicable, the congestion management plan in TMAs.

For each eligible application, the MPO or RPA adopts a formal resolution declaring the sponsor's proposed project or program conforms to the regional transportation planning process and plan. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in transportation management areas.) The MPO or RPA transmits the resolution to the sponsor.

### September

The sponsor transmits the application and all required documentation, including the MPO or RPA resolution, to the Iowa DOT Systems Planning Bureau. **Applications are due to the Iowa DOT by October 1 of each ICAAP funding year.**

### October – March

The Systems Planning Bureau, in cooperation with the ICAAP Project Evaluation Committee: (1) determines the eligibility of the proposals based on ICAAP guidelines; (2) evaluates them for reasonableness and accuracy; (3) assigns

scores to each proposal using Iowa Transportation Commission-adopted project evaluation criteria; and, (4) ranks the proposals to help determine funding recommendations.

The Systems Planning Bureau presents the ranked proposals, with funding recommendations, to the Iowa Transportation Commission for approval by March.

January - March

The Iowa Transportation Commission acts on the funding recommendations. The Systems Planning Bureau notifies the ICAAP applicants, MPOs and RPAs of the commission action.

After October 1 of the year following application submittal

The project sponsor begins development of the project in a timely manner and in communication with the appropriate Iowa DOT Administering Office to ensure all federal requirements are met. The Iowa DOT requests the FHWA or FTA to authorize federal funding for the ICAAP projects on a project-by-project basis. Federal funding authorization obligates the project funds and provides a date from which costs can be incurred by the project sponsor.

## **VII. Project Rating Criteria**

The Project Evaluation Committee will determine the eligibility of all proposed ICAAP projects or programs and evaluate and rank them on a competitive basis, using a range of points associated with the criteria listed below. For each criterion, the applicant must show quantitative analysis of the estimated traffic congestion reduction or air quality improvement benefits that will result from the proposed project or program within the study area. The applicants also must document, in the application, the methodology, assumptions and sources of data used in the analysis.

For the air quality improvement analysis, applicants should use the latest available VOC (HC), NO<sub>x</sub>, CO, PM-2.5 and PM-10 emission factors provided on the Iowa DOT website. Alternative emission estimates prepared with EPA approved factors suitable for Iowa may be substituted for those supplied by the Iowa DOT as long as they are documented.

Points	Criteria
0-25	Traffic flow improvement
0-25	VMT or SOV trip reduction
0-20	Vehicle emission reduction estimates
0-15	Degree of transportation-related air pollution or traffic congestion
0-30	Project cost effectiveness relative to air quality benefits
0-115	Total possible points.

The Project Evaluation Committee may refine the criteria to assist in the project ranking process. The rank of each project, based on total points, will be used to determine the Iowa DOT's staff funding recommendations to the Iowa Transportation Commission. The project rating criteria follow.

**Traffic congestion reduction and traffic flow improvement projects**

**(0-25 Points): Traffic flow improvement.** The project applicant must document how the proposed project or program will increase travel speed relative to roadway capacity improvements and/or reduce travel delay in the project area. The applicant also must describe all assumptions and list the data sources used in calculating travel speeds and vehicle delays.

**VMT and SOV reduction projects**

**(0-25 points): VMT or SOV trip reduction.** The project applicant must document how the proposed project or program reduces the total number of SOV trips or the VMT in the project area.

**All ICAAP projects**

**(0-20 points): Vehicle emission reduction estimates in the project area.** The applicant must document how many kilograms per day of VOC (HCs), NOx, CO, PM-2.5 or PM-10 vehicle emissions will be reduced. Ozone is a secondary air pollutant formed when precursor vehicle exhaust emissions – VOCs (hydrocarbons) and NOx—react with sunlight.

**(0-15 points): Degree of transportation-related air pollution or traffic congestion in the project area.** An area with a higher degree of transportation-related air pollution or traffic congestion will receive higher priority for

assistance. Air quality for the targeted pollutant(s) should be continually monitored, and the measurements documented.

**(0-30 points): Project cost-effectiveness relative to associated air quality benefits.** Project applicant must calculate the cost-effectiveness of the proposed project by dividing the average annual total cost of the project (total project cost divided by expected project life in years) by the total annual vehicle emissions reduction in kilograms per year for each target pollutant. [Average annual total project cost (dollars)] divided by [emissions reduction (kilograms per year)].

**Note:** The total cost of an ICAAP proposal includes all costs necessary to complete the project or program, consistent with the estimated benefits related to the proposal. A proposal's annualized cost should be determined by using the "useful life" of individual cost items as in the economic evaluation of highway and transit projects.

## **VIII. Project Sponsor Responsibilities**

Sponsors and joint sponsors must provide the following certifications with their applications: (1) MPO or RPA certification that the proposed project or program conforms with their region's transportation planning process, (MPOs must confirm that the project or program is included in the fiscally-constrained transportation plan or will be amended into the fiscally-constrained transportation plan upon grant approval, and, if applicable, the congestion management plan in TMAs); and (2) governing authority certification that it will properly maintain and operate the proposed project or program for public use during the project's useful life and commit the necessary local matching funds for the project. If a sponsor submits applications for multiple projects, the sponsor must rank the projects according to priority, from highest to lowest.

Sponsors should indicate in the application whether the proposal is a resubmittal (provide dates of previous submittals) or a new project. Sponsors must provide narrative descriptions of proposals and explain how they will have positive impacts on air quality and/or traffic congestion. They must show, by quantitative analysis, the estimated traffic congestion reduction and/or air quality improvement benefits that will result from the proposed project or program within the study area.

Sponsors must describe in the application the methodology, assumptions, and sources of data used in the analysis. For air quality improvement analysis, applicants should use the latest available VOC (HC), NO<sub>x</sub>, and CO, PM-2.5 and PM-10 emission factors provided by the Iowa DOT. For the traffic congestion reduction analysis, applicants should use travel demand (e.g. average daily traffic volumes) anticipated

to occur when the project is implemented. Sponsors may need to provide additional information upon request by the Iowa DOT during its review of applications.

**The ICAAP is a cost-reimbursable program; therefore, project costs must be initially borne by the sponsors prior to requesting reimbursement from the Iowa DOT. Any and all costs incurred by the sponsor prior to the: (1) execution of an agreement with the Iowa DOT; (2) completion of federal environmental process documentation; and/or, (3) federal funding authorization for the project and/or the phase of work are not eligible for reimbursement.**

**The ICAAP funding share for cities, counties, public transit agencies, metropolitan planning organizations (MPO), regional planning affiliations (RPA), state and federal agencies, private non-profit organizations, and individuals may not exceed 80% of the proposed cost of eligible projects with a minimum 20% local match. There will be a higher non-Federal match from those private entities under a PPP that ultimately will own the equipment with an even 50-50 split share between the ICAAP funding and all other funding sources. This local match requirement does not change if the project is swapped for PRF funds. Sponsors must provide local matching funds. Local matching funds cannot be in the form of volunteer or in-kind services or federal funds. However, state funds may be used as the local share unless prohibited by law. Sponsors are responsible for project cost overruns.**

## APPENDIX A – CONTACT INFORMATION

Questions about the ICAAP application process may be directed to:

Jared Smith, ICAAP Program Manager  
800 Lincoln Way  
Ames, IA 50010  
515-239-1713  
Jared.smith@iowadot.us

District Transportation Planner, MPO, and RPA Contact Information can be found on the Iowa DOT website at:

[https://iowadot.gov/systems\\_planning/District-Transportation-Planners-Area-of-Responsibility](https://iowadot.gov/systems_planning/District-Transportation-Planners-Area-of-Responsibility)

## APPENDIX B - ACRONYMS

ADA	Americans with Disabilities Act
CAAA	Clean Air Act Amendments
CE	Categorical exclusion
CMAQ	Congestion Management and Air Quality Improvement Program
CO	Carbon monoxide
DBE	Disadvantaged Business Enterprises
DNR	Department of Natural Resources (Iowa)
EIS	Environmental impact statement
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
4R	Reconstruction, rehabilitation, restoration and resurfacing
FTA	Federal Transit Administration
IARC	Iowa Association of Regional Councils
HC	Hydrocarbons
ICAAP	Iowa Clean Air Attainment Program
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IPTA	Iowa Public Transportation Association
ITS	Intelligent transportation system
MAP-21	Moving Ahead for Progress in the 21 <sup>st</sup> Century
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO <sub>x</sub>	Nitrogen oxides
O <sub>3</sub>	Ozone (ground-level)
PM	Particulate matter
PRF	Primary Road Fund
RPA	Regional planning affiliation (Transportation)
SIP	State Implementation Plan
SOV	Single occupant vehicle
SPB	Systems Planning Bureau (Iowa Department of Transportation)
STP	Surface Transportation Program
STIP	State Transportation Improvement Program
TEA-21	Transportation Equity Act for the 21st Century
TCM	Transportation control measure
TMA	Transportation management association
TIP	Transportation improvement program
VMT	Vehicle miles of travel
VOC	Volatile organic compounds

## APPENDIX C – FEDERAL REQUIREMENTS

### Federal Funding Requirements

Sponsors of ICAAP proposals to be implemented are responsible for complying with all relevant federal statutes and requirements and Iowa DOT Instructional Memorandums to Local Public Agencies. These instructional memorandums are available at:

[http://www.iowadot.gov/local\\_systems/publications/im/imtoc.pdf](http://www.iowadot.gov/local_systems/publications/im/imtoc.pdf).

Some of the requirements are summarized below:

**Public involvement** – The public, including directly affected groups or individuals such as adjacent property owners, must be involved during development of the proposed project or program.

**Right-of-way acquisition** – Acquisition of needed right-of-way for a Federal-aid project must comply with the requirements of the Uniform Relocation Acquisition and Real Property Acquisition Policies Act of 1970 (as amended by Title VI of the Surface Transportation and Uniform Relocation Assistance Act of 1987). Every eligible resident who is displaced because of the project must be offered a comparable replacement dwelling that is decent, safe, sanitary and adequate to accommodate the displaced person. Relocation advisory services are furnished and payments are made to cover costs incurred for moving, replacement housing, and certain incidental costs. Businesses, farms and nonprofit organizations are also reimbursed for moving and related expenses.

**Environmental review** – A project must comply with the National Environmental Policy Act (NEPA). This requires each project be evaluated to determine its impact on the environment. For projects that will have major impacts on the environment, a draft environmental impact statement (EIS) must be prepared. Some projects involving rehabilitation or safety upgrades may have minor environmental impacts and are considered categorical exclusions (CE) not requiring preparation of an EIS or an environmental assessment (EA).

For those projects that are not CE, an EA is usually prepared. If the EA reveals that the impacts are not significant, then a “Finding of No Significant Impact” (FONSI) is prepared. The environmental review must address project impacts for the following environmental categories:

- **Noise** – the significance of noise impacts during construction and after the project is completed.
- **Air quality** – Compliance with Iowa’s SIP for attaining and maintaining the NAAQS of the CAAA must be verified.
- **Cultural resources** – The proposed project site must be examined for disturbances of areas of archeological or historical significance.
- **Water quality** – The significance of impacts to water quality must be determined.
- **Wetlands** – The significance of impacts to wetlands must be determined.
- **Flood plains** – The significance of impacts to regulatory flood ways or 100-year flood plains must be determined.
- **Farmland protection** – Impacts to surround farmland must be determined.
- **Hazardous waste sites** – The location of any hazardous waste sites and a determination of the project’s impact on them must be established.

**Americans with Disabilities Act (ADA)** – Project sponsors must provide verification that their ICAAP proposals conform with the ADA, which requires projects be fully accessible to persons with disabilities.

**Disadvantaged Business Enterprises (DBE)** – Sponsors of federal-aid projects must provide verification that all efforts have been made to ensure that DBE firms have an opportunity to participate in the bidding for federal funded contracts.

**Davis-Bacon wage rate requirements** – The Davis-Bacon Act requires the payment of predetermined minimum wage rates on certain federal funded contracts. It applies to all federal-aid highway contracts exceeding \$2,000 for work by consultants or other contractors on federal-aid highways.

**Competitive bidding** – The implementation of a federal-aid project is to be done by a contract awarded by competitive bidding unless some other more cost-effective method, such as force account, is approved by the FHWA or FTA. The Iowa DOT assures there is an opportunity for free, open, competitive bidding, including adequate publicity of the advertisement or call for bids.

**Use of Engineering Consultants** – Consultant engineering and design related services contracts might be financed with federal-aid highway funds. When this occurs, these contracts must result from negotiations that utilize qualifications-based selection procedures, commonly referred to as the Brooks Act requirements. Qualification-based selection procedures do not allow price to be used as a factor in the selection process.

The Iowa DOT uses the Brooks Act requirements to govern consultant selection in Iowa. Local governments must employ the same procedures used by the Iowa DOT. For details on consultant selection, see the Iowa DOT's website:  
[http://www.iowadot.gov/local\\_systems/publications/im/3310.pdf](http://www.iowadot.gov/local_systems/publications/im/3310.pdf)

**Maintenance** – Federal highway law requires all federal-aid projects be properly maintained.

**Design-build contracting** – This is an alternative to the traditional design-bid-build contracting method. The contracting agency identifies the end result parameters and establishes the design criteria. The prospective bidders then develop proposals that optimize their construction abilities. Submitted proposals may be rated by the contracting agency on factors such as design quality, timeliness, management capability and cost.

These factors may be used to adjust the bids for the purpose of awarding the contract. FHWA approval and competitive bidding procedures are required if federal funds are to be used in design-build contracting.

**Buy America** – This provision requires the use of domestic steel and iron in federal-aid highway construction projects. However, waivers may be granted by FHWA. All public transportation vehicles and equipment purchased for the project must meet the "Buy America" provisions.

**13C Labor Protection** – For public mass transportation proposals, labor protection must be provided to any transit worker whose job may be adversely affected by the project.